## Abstract of the Invention

A polarimeter includes a receiver that is configured to receive a first polarization (P1) of the signal and to split the first polarization of the signal into the inphase ( $I_{P1}$ ) and quadrature ( $Q_{P1}$ ) components and to receive a second polarization (P2) of the signal and to split the second polarization of the signal into the in-phase ( $I_{P2}$ ) and quadrature ( $Q_{P2}$ ) components. The polarimeter may also include a processor that is configured to receive each of the in-phase and quadrature components ( $I_{P1}$ ), ( $I_{P2}$ ), and ( $I_{P2}$ ) of the first and second polarizations and to determine the Stokes polarization vector components ( $I_{P1}$ ),  $I_{P2}$ , and  $I_{P2}$ ) of the signal.

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